

Gastrointestinal and Liver Pathology at Rush

1750 W. Harrison St., Suite 570, Chicago, IL 60612 ♦ (312) 942-5227 phone ♦ (312) 942-4228 fax

Case of the Month Answer – December 2010

Contributed by Drs. Marlene Gallegos and Shriram Jakate

Diagnosis: Schistosomiasis of the colon

All *Schistosoma* species have the capability to cause significant GI disease.¹ Infestation of the large intestine is mostly caused by *Schistosoma mansoni* and *S. japonicum*. *S. haematobium* is found in the bladder and only rarely involves the intestine. *S. mansoni* is endemic in African and central South American countries, including the Caribbean islands. *S. japonicum* is found in Japan, China, and the Phillipine Islands and the countries of south-east Asia. *S. haematobium* is found in Africa, particularly Egypt, and in countries of the near Middle East.²

The infection occurs in humans while wading or bathing in water contaminated with the larval stage of the worm, cercaria. This penetrates the skin and enters venules, from where it is carried through the heart and systemic circulation to the liver where the cercaria mature to adult worms. These migrate to the mesenteric veins, and particularly the submucosal vessels of the gut, where they lay their ova. The latter pass through the intestines into the feces. The cycle is completed in water contaminated with feces containing eggs. The latter hatch out, liberating larvae which are ingested by the intermediate host, the snail, within which the second larval stage of cercariae develop and eventually emerge in a free swimming form.²

Patients generally present with bloody diarrhea, accompanied by anemia, weight loss, and protein-losing enteropathy. More dramatic GI presentations have also been described, such as profound dysentery-like illness, obstruction, perforation, intussusception, rectal prolapse, fistulae, and perianal abscesses.¹ Any level of the GI tract may be affected; however, lesions are most common in the rectum and left colon and nearly always due to *S. mansoni*.^{1, 2} On the right side of the colon and the appendix, *S. japonicum* is more common.¹

Endoscopically, *Schistosoma* can be seen to cause inflammatory polyposis (particularly in the distal colon) with associated mucosal granularity, friability, punctuate ulcers, and hemorrhages. Histologically, inflammatory polyps and mucosal ulcers, with associated granulomatous inflammation and an eosinophilic infiltrate are typical. Eggs may be detected in histologic specimens and are sometimes calcified (Fig. A and Fig. B). In fact, worms are occasionally seen in veins.¹

There is an increased incidence of carcinoma of the large bowel in patients with chronic schistosomal infection. Dysplasia probably precedes the development of carcinoma in a fashion similar to ulcerative colitis.²

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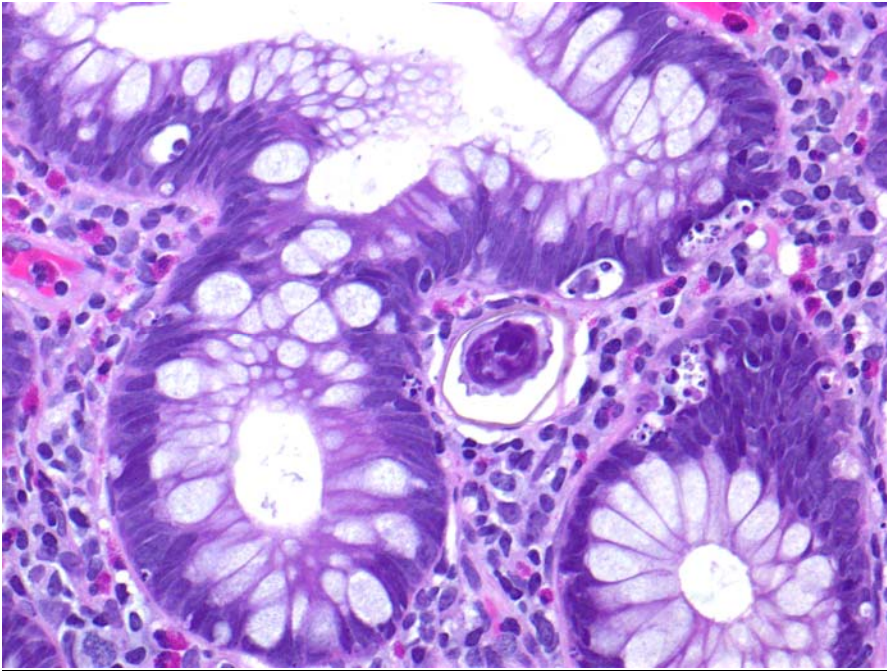


Fig. A

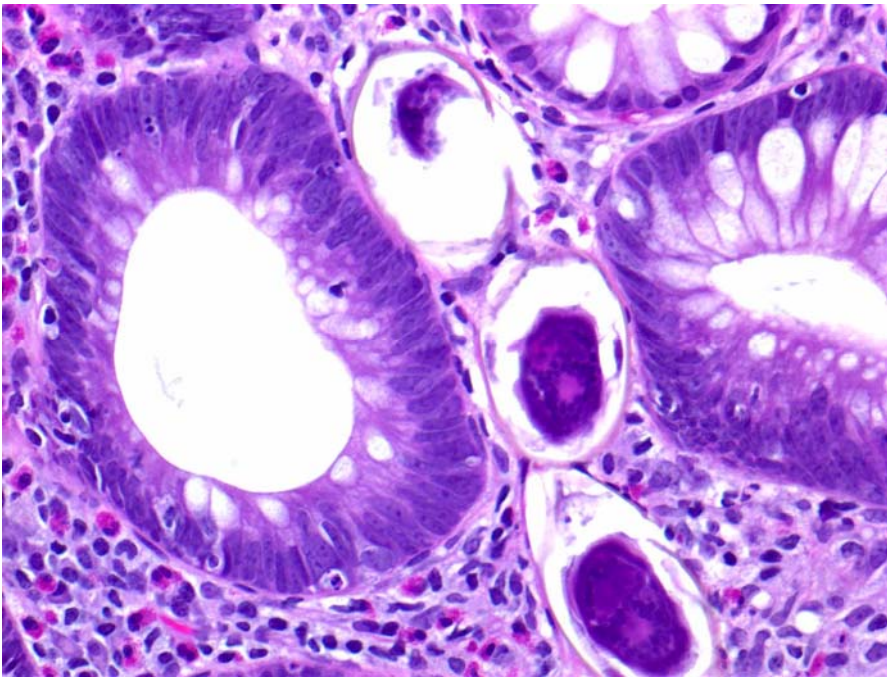


Fig. B

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